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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/684,162 | 10/10/2003 | Edze Jan Tijsma | Tijsma 3-3-1-1 X | 2291 |

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| EXAMINER |
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LEVY, NEIL S

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| ART UNIT | PAPER NUMBER |
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1616

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/684,162

Applicant(s)

TIJSMA ET AL.

Examiner

Neil Levy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27-21, 23-27 is/are rejected.
- 7) ☒ Claim(s) 8, 22 is/are objected to.
- 8) ☒ Claim(s) 1-27 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

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Claims 1, 14, 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Abbreviations should be identified at first occurrence in claims (WVTR). Claim 14 needs a period.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 9, 10 12-16, 18, 23, 24, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore-4969947.

Moore has water soluble fertilizers (col.3, bottom, 4 top) as, granules (line 31, col.4), coated with a single layer, homogeneously (col.4, lines 33-49) with polymers of the instant invention as claimed (col.5, top, col.7, lines 22-28). It takes 7 days, for 15% release to occur (example 3) thus less than 15% would have had to have been release within the first 24 hours, and an extended time is shown for complete release-if 7 days results in 15%, then straight line assumption finds 50% longevity at less than 28 days, and finds 75% released in 35 days, less than the claimed 60. The functions shown the same as claimed, regarding coating the water soluble fertilizes granules with single

coatings, would inherently find all other functions the same-WDTR, gas permeability (semipermeable layer). See col.4, top-sulfur. The composition is a soil fertilizer; no patentable weight give to future intended potting use.

Claims 1, 2, 9-16, 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolstenholme, et al EP 0731067.

See fig. 1: urethane coated phosphate shows less than 15% release, from thin coat, in first day, 80% released by day 40, thus the instantly claimed longevity of less than 60 days the water soluble fertilizers are granular (p.3, lines 39, 41). Polymers are acrylate, cellulose, with incorporated sulfur (p.3, lines 43-45) with semipermeability taught as determinable by artisan, to achieve 80% nutrient core release within 30 days (p.3, lines 45-520 and total release within 60 days.

Preparation was in a rotating drum(example 1) the one layer instantly claimed is present, under the open instant language, so may be added layers-number of layer determines longevity. See claims 3, 4-inherently, the claimed properties of the instant coated particles are met, and attainable by the artisan by using the instant materials and processing to achieve desired release rates. The coating layer applied is in accord with the instant thickness-0.5% a 2.8 mm granule would result in about 14 microns; about the claimed 20 micron thickness for one layer. No restriction on future intended use is taught, thus, claim 14 instant is met.

Claims 1-7, 9-21, 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tijssma et al 993505 and Wolsten Holme-EP 0731067.

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Tijisma see claim 1-the controlled release single semipermeable coating of water soluble fertilizer, such that less than 15% (10%) is released in 24 hours (it takes 30 days) claim 3 shows coating thickness of 5-110 microns, claim 4 the processing. Polymers used are as instantly claimed (col.3)-urethane resin, PVA, PVC, polycaprolactone, polyethylenes, celluloseacetates. Fertilizers include phosphates-example 1, as granules added fertilizers (example 1 are Fe, Mn, Zn, Cu, B, Mg).

Tijisma did not provide longevity of < 60 days. Wolfstenholme does (see above) and shows it was known to require fertilizer over the longevity of the Tijisma periods (p.2, lines 38-42). However, Wolfstenholme shows thimer is better, for quicker release (Example 1; Table 1), and any number of polymers can be used-thus those of Tijisma, but with coating level varied, as also taught by Tijisma(col.5, lines 35-40) but without specifying that required for shorter longevity.

Thus, it would be obvious to one of ordinary skill in the art desiring to utilize a slow release composition, to use one of Tijisma, modified with Wolstenholme to provide acceptable release profiles and also provide the normal art recognized mineral fertilizers, at one operation. The polymer and the amounts and proportions of polymers are result effective parameters chosen to obtain the desired effects. It would be obvious to vary the amount of each ingredient to optimize the effect desired increased pesticide concentration, increased freeze protection and the use of adjuvant ingredients for the functionality for which they are known to be used is not a basis for patentability.

Applicant has not provided any object evidence of criticality, nonobvious or unexpected results that the administration of the particular polymer ingredients' or concentrations provides any greater or different level of prior art expectation as claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil Levy whose telephone number is 571-272-0619. The examiner can normally be reached on T-F from 7:00a.m to 5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page, can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Levy/tgd

May 12, 2004

NEIL S. LEVY
PRIMARY EXAMINER